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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,231	03/03/2004	Yu-Kai Lin	250122-1300	4781

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EXAMINER

CHANDRAN, BIJU INDIRA

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/792,231	Applicant(s) LIN, YU-KAI	
	Examiner Biju Chandran	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-6, 8-13, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Inoue et al. (US 2003/0020152 A1).
 - Regarding claim 1, Inoue et al. disclose a plasma display (10) comprising (see detail in figure 7): a base plate (70), a back cover (13) engaged with the base plate to form a space; a first circuit board (40) disposed in the space and mounted on the base plate; a first electronic element (58) disposed on the first circuit board; first thermal conductive device (68) disposed between the first electronic element and the back cover and mounted on the first electronic element.
 - Regarding claim 2 and 3, Inoue et al. further disclose that that the base plate is a metal plate made of Aluminum (paragraph 0074).

- Regarding claim 4, Inoue et al. further disclose that the first thermal conductive device comprises a thermal conductive spring element ('springiness' described in the middle of paragraph 0115).
- Regarding claim 5, Inoue et al further disclose that the thermal conductive spring element has a spring portion secured on the first electronic element and the contact portion abutting the back cover (13) (see figure 7).
- Regarding claim 6, Inoue et al. further disclose that the spring element is integrally formed with the contact portion.
- Regarding claim 8, Inoue et al. further disclose a plurality of first supporters disposed between and separating the first circuit board and the base plate by an appropriate distance (first few lines of paragraph 0074).
- Regarding claim 9, Inoue et al. further disclose a second electronic element (18x) disposed on the first circuit board opposite to the first electronic element.
- Regarding claim 10, Inoue et al, further disclose a second circuit board (52) mounted between the first circuit board and the base plate; a third electronic element (32X) disposed on the second circuit board and positioned between the first circuit board and the second circuit board.
- Regarding claim 11, Inoue et al. further discloses that the first thermal conductive device (68) comprises a thermal pad.

- Regarding claim 12 and 13, Inoue et al. disclose fasteners that are bolts (72), fixing the back cover to the first circuit board (paragraph 0077).
- Regarding claim 19, Inoue et al. further disclose that the second circuit board is mounted on the base plate.
- Regarding claim 20, Inoue et al. further disclose a fifth electronic element disposed on the first circuit board opposite the first electronic element (18y).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. in view of Nguyen et al. (US 2003/0068487 A1). Inoue et al. disclose all the limitations of claim 4 but does not disclose that the thermal conductive spring element comprises copper. Nguyen et al. disclose thermal conductive spring elements comprising copper ('springiness' described in paragraphs 0017 and 0020, 'copper' described in paragraph 0024). At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the thermal conductive spring

element taught by Nguyen et al. in the plasma display disclosed by Inoue et al. to make use of its excellent thermal and reliability performance (paragraph 0006).

3. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. in view of Tani et al. (US 5,971,566).
 - Regarding claim 14, Inoue et al. disclose all the limitations of claim 10 and further disclose a fourth electronic element (12) disposed on the first circuit board and a second device (15) disposed between the fourth electronic element and the back cover (13) and mounted on the fourth electronic element. Inoue et al. do not explicitly disclose that the second device (15) is a thermally conductive device. Tani et al. disclose a plasma display (figure 21) with a thermally conductive device (44) disposed between the fourth electronic element (42) and the back cover (38). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the second thermally conductive device taught by Tani et al. in the plasma display disclosed by Inoue et al. to prevent fracture of the electronic element during temperature variations along the surface of the electronic element during operation (column 1, lines 50-67).

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- Regarding claim 15, Tani et al. further disclose that the second thermal conductive element comprises a thermally conductive spring element (column 4, lines 35-40).
 - Regarding claim 16, Tani et al. further disclose that the thermally conductive spring element has a spring portion secured on the first electronic element and a contact portion abutting the back cover (figure 21).
 - Regarding claim 17, Tani et al. further discloses that the spring element is integrally formed with the contact portion.
4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. in view of Tani et al. as applied to claim 17 above, and further in view of Nguyen et al. Inoue et al. as modified by Tani et al. disclose all the limitations of claim 17 but does not disclose that the thermal conductive spring element comprises copper. Nguyen et al. disclose thermal conductive spring elements comprising copper ('springiness' described in paragraphs 0017 and 0020, 'copper' described in paragraph 0024). At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the thermal conductive spring element taught by Nguyen et al. in the plasma display disclosed by Inoue et al. to make use of its excellent thermal and reliability performance (paragraph 0006).

Response to Arguments

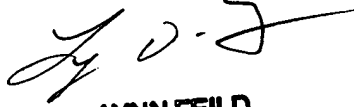
Applicant's arguments filed on 01/09/2006 have been fully considered but they are not persuasive. However, previous rejections of claims 1-20 has been withdrawn due to inapplicability of the prior art used, and new grounds of rejection applied.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Biju Chandran whose telephone number is (571) 272-5953. The examiner can normally be reached on 8AM - 5PM. Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LYNN FEILD
SUPERVISORY PATENT EXAMINER